PRISM
The Program for Research Initiatives for Science Majors at John Jay College
Annual Report

A program supported by CSTEP (the New York State Education Department), Title V (the U.S. Department of Education), and CCRAA (the U. S. Department of Education), with additional financial support through LSAMP (the National Science Foundation)

Annual Progress Report: October 1, 2009 – September 30, 2010

Senior Personnel: Anthony Carpi, Lawrence Kobilinsky, Ronald Pilette
Other Personnel: Adanna Grandison, Teeshavi Narayne, Heather Falconer
Report Date: November 2010

2009-2010 Year Progress

As detailed in our first annual progress report dated 2006-2007, PRISM was established in fall 2006 to promote the expansion of undergraduate research in the science programs at John Jay College. In that first year, thirteen students shared in $21,000 of funding. Now having completed its fourth year of operation, the program has greatly expanded and has had a profound influence on promoting undergraduate science research at the college. In the 2009-2010 academic year, twenty-eight students shared in $75,000 of stipend support, $24,000 in materials and supplies support, and $12,000 in travel support. In addition, $100,000 was made available through PRISM to faculty in the Department of Sciences to update and upgrade research equipment used in the course of student mentoring. Fifteen students participated in non-funded research (all will be funded during the current academic year). Twenty-nine students participated in our post-second year research training course. Additionally, many more science majors were exposed to PRISM via attendance at one or more PRISM event held throughout the year.

The quality of undergraduate research continues at a high level. Students engaged in research averaged over 300 hours in their time commitment. Each of those receiving credit for research performed over 400 hours of mentor-supervised research. Two
students won a second prize and a third prize in their respective science categories at the Annual CSTEP Statewide Student Research Conference (CSTEP is comprised of 50 colleges and universities located in New York State). One student received the 2010 Eastern Analytical Symposium’s Undergraduate Student Research Award. And PRISM students presented their work at three additional national or regional conferences outside of the College and at four meetings at the College.

The third annual John Jay College PRISM Undergraduate Research Symposium was held on May 7, 2010 as part of the second annual college-wide Celebrating Student Research event. It was attended by over 80 students, faculty, and administrators. The event featured an invited talk from a former John Jay College undergraduate student, Dr. Julie Layshock, who recently earned her PhD in Environmental Toxicology from Oregon State University. Twenty-six PRISM students presented posters at the event and one student, Jason Quinones, gave an oral presentation as winner of the annual prize for outstanding undergraduate research.

At the January Information Day, PRISM students presented posters and discussed their interests, invited speakers gave talks on career options, and program information was distributed to lower classman interested in research. Post second-year research training continued, and two training courses were held to accommodate all interested and eligible students. Faculty discussed the importance of research as well as how they first became interested in science and research. At a week-long writing intensive session for post-Freshman students, laboratory safety training and the scientific writing process were emphasized. Outreach to the Borough of Manhattan Community College continued. A
comprehensive GRE course was offered twice. A trip was made to the Peabody Museum, Beinecke Rare Books Library, and Yale University.

Five graduates of the PRISM program have been accepted and are now enrolled in graduate and medical school programs. Danielle Scimeca is now in her first year of an MD/PhD program at the University of Miami; Jason Quinones is in his first year of a PhD program in Pharmacology & Toxicology at SUNY Stony Brook; Katherine Reynoso is in her first year of a PhD program in Biochemistry at the CUNY Graduate Center; and Teeshavi Narayne and Amanda Vasquez are both enrolled in the Masters of Forensic Science program at John Jay College.

Near-Term Goals

Despite the overall success of current efforts, there is still significant progress that can be made. A priority for the coming year is to increase dissemination of the program both internally, to assure all students are aware of the program, and externally, to maintain contact with program alumni. Toward this end, the Program is currently working on a Chronicle of Student Research, a publication that includes short biographies and research abstracts of projects underway during the 2009-2010 year. Further, a Program website is underway and should be completed in Spring 2011. The Program website will provide information to students about joining PRISM, resources to faculty to support their mentoring efforts, and a means to reach out to, and maintain contact with, program alumni.

In respect to the size of the Program, we do not expect that the number of students to rise significantly in the near future as nearly half of all students who graduate with a
Bachelors degree in Forensic Science are engaged in research through PRISM. Given that the Forensic Science program also maintains an alternate capstone experience for students wishing to enter professional employment immediately upon graduation, an external laboratory internship, we project that PRISM will continue to serve approximately half of the students in the program with the remainder participating in the external internship program. As graduation numbers increase in the Forensic Science program, PRISM numbers are likely to increase in kind.

This year, we will begin research training with second year students during the winter intersession. The intent is to make it possible for qualified students to start research under a mentor’s guidance in the summer after their second year in the major. We plan to continue the development of training classes in laboratory safety as well as to emphasize the development of scientific writing skills in these sessions. The Program also expects to expand the resources we provide to student researchers, including laboratory notebooks, USB data drives, and other supplies.

We will continue outreach to several of the CUNY community colleges, especially the Borough of Manhattan Community College and Queensborough Community College, to identify potential transfer students who often miss out on undergraduate research opportunities, as they do not often have such opportunities in their junior college years, and do not learn about our program in a timely fashion when they transfer to the College.
## Funded Research Students

<table>
<thead>
<tr>
<th>Name</th>
<th>Mentor</th>
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<tbody>
<tr>
<td>Chantel Amarillo</td>
<td>(Jason Rauceo)</td>
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<td>Davonne Auguste</td>
<td>(Ali Kocak)</td>
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<td>Manuel Chaparro</td>
<td>(Nicholas Petraco)</td>
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<td>Roselyn Cordero</td>
<td>(Gloria Proni)</td>
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<td>Carlos Cuellar</td>
<td>(Demi Cheng)</td>
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<tr>
<td>Eugene Gonzalez-Lopez</td>
<td>(Gloria Proni)</td>
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<tr>
<td>Christina Hui</td>
<td>(Anthony Carpi)</td>
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<tr>
<td>Tali Klepfisz</td>
<td>(Gloria Proni)</td>
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<tr>
<td>Sandy Kong</td>
<td>(Elise Champeil)</td>
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<td>Lidissy Liriano</td>
<td>(Richard Li)</td>
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<td>Michael Lugo</td>
<td>(Nathan Lents)</td>
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<td>Elaan Lukasiewicz</td>
<td>(Elise Champeil)</td>
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<td>Nazia Mahmood</td>
<td>(Yi He)</td>
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<td>Amora Mayo-Perez</td>
<td>(Anthony Carpi)</td>
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<td>Dominika Mucha</td>
<td>(Yi He)</td>
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<td>Teeshavi Narayne</td>
<td>(Yi He)</td>
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<tr>
<td>William Ng</td>
<td>(Ekaterina Korobkova)</td>
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<tr>
<td>Bryant Pascal</td>
<td>(Gloria Proni)</td>
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<tr>
<td>Richard Piszczatowski</td>
<td>(Nathan Lents)</td>
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<tr>
<td>Jason Quinones</td>
<td>(Anthony Carpi/Demi Cheng)</td>
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<td>Katherine Reynoso</td>
<td>(Diana Friedland)</td>
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<td>Danielle Scimeca</td>
<td>(Nicholas Petraco)</td>
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<td>Samantha Sellers</td>
<td>(Elise Champeil)</td>
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<td>Leonid Sukala</td>
<td>(Jason Rauceo)</td>
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<td>Amanda Vasquez</td>
<td>(Gloria Proni)</td>
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<td>Stephanie Watson</td>
<td>(Elise Champeil)</td>
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<tr>
<td>Alicia Williams</td>
<td>(Ekaterina Korobkova)</td>
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<td>Ayaka Yamada</td>
<td>(Diana Friedland)</td>
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## Non-funded Research Students

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<tr>
<td>Cindi- Ann Williams</td>
<td>(Cheng)</td>
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<tr>
<td>Anna Stoll</td>
<td>(Cheng)</td>
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<tr>
<td>Konrad Ornatowski</td>
<td>(Friedland)</td>
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PRISM
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Annual Report

4. Eva Santos (Carpi)
5. Karry Jonston (Korobkova)
6. Ying Lin (Cheng)
7. Melinda Liu (Korobkova)
8. Justin Walters (Friedland)
9. Christopher Shaw (Friedland)
10. Laura Singh (Corthals)
11. Natasha Dalton (Proni)
12. Ankit Bhatta (Li)
13. Irving Campoverde (Proni)
14. James Field (Proni)
15. Latoya Patrick-Saunders (Champeil)

PRISM Graduates 2009

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<tr>
<th>Name</th>
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<tr>
<td>1. Chantel Amarillo</td>
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<td>(Demi Cheng)</td>
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<td>8. Amanda Vasquez</td>
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<tr>
<td>9. Teeshavi Narayne</td>
<td>(Yi He)</td>
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<tr>
<td>10. Samantha Sellers</td>
<td>(Elise Champeil)</td>
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Second Year Research Training Course - 2010 (Anthony Carpi & Diana Friedland, Instructors)

This training course covered a variety of topics in over 30 hours of class and laboratory meetings. Classroom and laboratory topics included Scientific Writing, Ethics in Science & Medicine; Responsible Conduct in Scientific Research; Introduction to Literature Searching for the Scientist; Introduction to Protocol/ Experimental Design; Introduction to Acid/Base Chemistry; Buffers and Protein Quantification; Introduction to Data Analysis Techniques and Introduction to Laboratory Techniques for Bio-Chemical Research. Many of the students also visited the Peabody Museum and Yale University.
Second Year Research Training Course Participants

**June 2010**

1. Konrad Ornatowski
2. Andrea Saenz
3. Cindi-Ann Williams
4. Anna Stoll
5. Karry Jonston
6. Ying Lin
7. Melinda Liu
8. Justin Walters
9. Christopher Shaw
10. Mitchel Rubenfield
11. Thomas Sljukic
12. Natasha Dalton
13. Matthew Moore
14. Steven Schultheiss
15. Alyssa Calderone
16. Karry Jonston
17. Ying Lin
18. Justin Walters
19. Christopher Shaw
20. James Field

**August 2010**

1. Irving Campoverde
2. Jairie Jimenez
3. Laura Singh
4. Mitchel Rubenfield
5. Thomas Sljukic
6. Natasha Dalton
7. Matthew Moore
8. Steven Schultheiss
9. Alyssa Calderone
10. Elliot Quinteros
11. Mikeisha Cadougan
12. Sasha Brito
13. Latoya Patrick Saunders
14. Andrea Lopez
15. Kyung Chang
16. Tiya Chang
17. Mengjun Chen
18. Kristi Cho
19. Ankit Bhatta
20. James Field

**Awards**
Amora Mayo-Perez and Jason Quinones were selected as recipients of second and third place awards, respectively, for their poster presentations at the Annual CSTEP Conference.

Jason Quinones was selected as the recipient of the 2009-2010 Outstanding Science Undergraduate Research Student at John Jay College

**John Jay College Scholarship Winners**

1. Jairie Jimenez
2. Michael Lugo
3. Dominika Mucha
4. Richard Piszczatowski
5. Laura Singh
6. Amanda Vasquez
Presentations


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Publications

Oral Presentations

Conferences attended at which PRISM students made presentations
American Chemical Society National Meeting, Boston, MS, August 2010.
18th Annual CSTEP Conference, Lake George, NY, April 1-3, 2010.